

WAYNE COUNTY

Cost of Community Services Study

Prepared by
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MOUNT OLIVE
COLLEGE



WAYNECOUNTY
NORTH CAROLINA

MILITARY GROWTH TASK FORCE



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Executive Summary

American Farmland Trust first introduced the idea of Cost of Community Services (COCS) studies because agricultural land was converted to development more often than any other type of land. With that in mind, this COCS study was conducted in order to determine the public service costs versus revenues based on current land uses in Wayne County, North Carolina.¹ Revenues and expenditures were analyzed on a land use basis for fiscal year 2010 (July 2009 to June 2010) in order to compare the overall contribution of agricultural lands with residential, commercial and industrial development.

The county budget was used as the source of data because it represents revenues and expenditures for the largest portion of government services provided to residents. **This COCS study found that in Wayne County:**

- 70 percent of revenue in fiscal year 2010 was generated by residential land uses; 23 percent was generated by commercial land uses; and 7 percent by farmland.
- 89 percent of county expenditures were used to provide community services for residential land uses compared with 8 percent for commercial land uses and 3 percent for farmland.

In other words, for each \$1 of revenue received from residential properties in fiscal year 2010, Wayne County spent \$1.24 in providing services to those properties. For each \$1 of revenue from commercial land uses, the county spent 34 cents; and for each \$1 received from farmland, the county spent 47 cents to provide essential services.

¹The land category designations are the following:

- *The term "agricultural land use" includes farms, forests and open space.*
- *The term "commercial land use" includes both commercial and industrial land uses.*
- *The term "residential development" includes housing, including rentals, but does not include temporary housing for migrant agricultural work force, which is included as part of agricultural land use. Note that the farm business has been separated from the farm residence, with the property value of farm residences assessed in the same manner as any other residences. Therefore farm residences would be included in the residential land use category.*

While residential land uses contribute the largest amount of revenue, \$64 million, the net fiscal impact is negative. Residential land uses create a deficit of \$15.4 million, while the other two land use categories generate surpluses: \$13.8 million from commercial and \$3.3 million from farmland (Table 1). Commercial and farmland generate significant revenue from property taxes, enough net revenue in fact to offset the shortfall created by residential development.

Agricultural lands contribute more in local tax revenues than they receive in services. Differential property tax programs, such as Present-Use Value², provide an incentive to keep land open and in active agricultural use. Even with the present-use value taxes, agricultural properties contribute a surplus of revenue that helps to provide public services for Wayne County residents.

Table 1. Wayne County Cost of Community Services Study Findings

Wayne County	FY 2010 Actual	Residential	Commercial	Farmland
Total Revenues	\$ 91,280,032	\$ 64,040,726	\$ 21,032,183	\$ 6,207,123
Total Expenditures	\$ 89,617,017	\$ 79,440,270	\$ 7,257,531	\$ 2,919,216
Net contribution	\$ 1,663,015	(\$ 15,399,544)	\$ 13,774,652	\$ 3,287,907
Land use ratio*		\$ 1.00/\$ 1.24	\$ 1.00/ \$ 0.34	\$ 1.00/ \$0.47

***For each \$1 of revenue generated, the cost of services provided.**

²Present-Use Value, or PUV, is a program established by N.C.G.S. §§ 105—277.2 to .7 and administered by the county tax assessor through which qualifying property can be assessed, for property tax purposes, based on its use as agricultural, horticultural or forest land. The present-use value is the value of the land based solely on its ability to produce income. Qualifying property is assessed at its present-use value rather than its market value. The tax office also maintains a market value for the land, and the difference between the market value and the present-use value is maintained in the tax records as deferred taxes. When land becomes disqualified from the program, the deferred taxes for the current and three previous years with interest will usually become payable and due. (Dixon, Stan. *Wayne County Farmland Preservation Plan*, 2009).

INTRODUCTION

Most communities fail to realize that saving land saves money. While residents demand expensive public services and infrastructure, privately-owned working lands enhance community character and quality of life without requiring significant public expenditures. Their fiscal contributions typically are overlooked, but like commercial and industrial land uses, agricultural (farm, ranch and forest) lands generate surplus revenues that play an essential role in balancing community budgets. This, perhaps, is the most important lesson learned from Cost of Community Services (COCS) studies.

Numerous COCS studies have been completed by a variety of researchers around the country for cities and rural communities. The maximum, median, and minimum ratios of local government expenditures-to-revenues collected from these studies are shown in Table 3 of the Appendix. The median ratio states that for every dollar the county generates from the residential category, it spends \$1.16 in services. The commercial/industrial and farm/forestland categories show that, on average, the government receives more than it spends and therefore, these land uses create a budget surplus. These numbers show the fallacy of depending on residential development as the road to a sound growth policy. Residential development has not generated sufficient revenue to cover its associated expenditures as reported in various NC county studies and American Farmland Preservation Trust studies across the nation.

American Farmland Trust developed the COCS fiscal analysis to provide a baseline of information to help local officials and citizens make informed land use decisions. The purpose of a Cost of Community Services Study is not to suggest any prescriptive course of action, but to provide reliable financial data, allowing local government officials to make informed planning decisions and evaluate strategies that will maintain a balance in the distribution of future land uses. By using statistics and financial land use and economic data specific to Wayne County, this COCS study can help move public dialogue from emotion to analysis and from speculation to projection.

WAYNE COUNTY: DEMOGRAPHICS³

Wayne County's economy relies greatly on agriculture and agribusiness. At the same time, its excellent transportation system, diverse manufacturing sector and low cost business climate are attractive for both business location and expansion. Wayne County's geographic location coupled with its progressive infrastructural amenities creates anticipated pressure from urbanization which has already resulted in rapid loss of farmland statewide. This COCS study has been prepared to emphasize the importance of farmland to Wayne County's overall economic health. Wayne County's economic viability can withstand this anticipated growth only with a strong economic base, one to which agriculture makes a significant contribution. The preservation of farmland is imperative to the continued prosperity of the county and its people.

Location

Wayne County is approximately fifty miles southeast of the state's capital, Raleigh. Goldsboro, located in the geographic center, is the county seat. Wayne County includes six other municipalities – Eureka, Fremont, Mount Olive, Pikeville, Seven Springs and the Village of Walnut Creek. Wayne County is the home of Seymour Johnson Air Force Base whose annual economic impact exceeds \$520 million. The county is located in the east central portion of the state in the upper coastal plain. Comprising 355,200 acres and 557 square miles, it measures 29 miles from north to south and 14 to 27 miles from east to west.

Elevation in Wayne County is predominately 111 feet above sea level. The Neuse River, the largest waterway, bisects the lower central portion of the county. The average annual rainfall and temperature in Wayne County is 50 inches and 62 degrees, respectively. The combination of a mild climate, a freeze-free growing season of about 225 days and a wide range of soil types contribute to a highly productive industrial and agricultural environment.

³ *Comprehensive Annual Financial Report. Wayne County, North Carolina, Fiscal Year Ended June 30, 2010.*

Transportation

The county's excellent transportation system provides access to national and international markets. Goldsboro, the county seat, was designated in 1982 as a Metropolitan Planning Organization (MPO) by the United States Government Accountability Office. A MPO is a transportation policy organization composed of local government officials and transportation authorities for areas with populations in excess of 50,000. Goldsboro is at the crossroads of two major highways, US 70 (East and West) and US 117, also known as I-795 (North and South). Interstate 95 and I-40 are both within thirty minutes of Goldsboro while the Atlantic coast's beaches and ports (Morehead City and Wilmington) are less than two hours away.

Commercial airline services are available at Raleigh-Durham International Airport which is 65 miles west of Goldsboro. The county has two private airports, Goldsboro Wayne Municipal Airport with a runway of 5,500 feet and Mount Olive Municipal Airport at 4,250 feet. Within thirty minutes of Goldsboro, the Kinston Regional Jetport at the Global TransPark boasts of the longest civilian runway in the state, 11,500 feet. Such varied transportation infrastructure that is continually developed and improved within Wayne County has afforded it the potential for growth along these corridors and connections to markets beyond.

Population

The US Census Bureau reports that the population of Wayne County in 2010 was 122,623, with 221.9 persons per square mile. The population of Goldsboro, the county seat and a designated metropolitan statistics area (MSA), is 36,437. Persons 65 and over compose 13.1 percent of the population, while those under 18 years of age compose 24.9 percent. The rate of population growth between 2000 and 2010 was 8.2%.

According to the N.C. Department of Agriculture and Consumer Services (NCDA&CS), 600,000 acres of farmland were lost statewide from 2002 to 2007. NC Commissioner of Agriculture, Steve Troxler, stated that the loss was due largely to residential development needed to accommodate the 1 million people who have relocated to North Carolina since 2000 (NCDA & CS Public Affairs Division press release, February 4, 2009). Between 1997

and 2007, Wayne County alone lost 54,000 acres of farmland, which likewise can be attributed to an increase in new residential development (*Wayne County Farmland Preservation Plan*).

Economy

Wayne County has a diversified industrial base of more than sixty companies that has allowed it to survive difficult economic downturns and restructuring. Wayne County's local industries are involved in a range of operations from simple assembly to complex manufacturing processes which result in products ranging from bread and poultry feed to automobile parts and electric transformers. Case Farms, Inc., located in Goldsboro, leads manufacturers in Wayne County with 1025 employees. This firm processes 800,000 chickens per week and produces in excess of 245 million pounds per year.

Wayne County takes pride in being the home of Seymour Johnson Air Force Base (SJAFB), home to the 4th Fighter Wing and 916th Air Refueling Wing. SJAFB is the leading non-manufacturing employer with 6,171 employees involved in the defense industry. With an annual civilian and military payroll of over \$339 million, the economic impact to the county of the military is over \$520 million yearly, which, although significant, is less than the economic impact of agriculture at \$763 million.

Agriculture is big business in Wayne County, with annual total gross farm sales of approximately \$330 million and livestock and poultry production valued at more than \$236 million. As a result, the agribusiness sector plays a vital role in the total economy of the county. While livestock and tobacco production contribute greatly to the county's annual cash receipts, the forestry industry is another important sector of the agribusiness economy. Almost one-half (40 percent) of the total land area in Wayne County is comprised of forested acreage contributing over \$26 million annually in sales (Wayne Vision 2009). In addition, 96 percent of this forested acreage in Wayne County is privately owned.

AGRICULTURE⁴

Agriculture is an essential component of Wayne County's economy, in addition to the quality of life and sustainability of the community. The Census of Agriculture provides the most comprehensive statistical overview of the impact that agriculture has on counties, states and the nation as a whole. The following information was obtained from the 2007 Census of Agriculture and describes Wayne County, North Carolina:

- 3rd largest agricultural county in NC
- Land in agricultural production: 175,265 acres
- Farms: 48% of total land in county
- Farmland and forest: 71% of total land in county
- Land in forest 141,600 acres
- Number of farms: 723
- Agriculture : 21% of county's total employment - 11,831 jobs
- Average size of farm: 242 acres
- Market value of production: all crop sales (includes horticultural crops) - \$92,842,403; Livestock sales - \$264,383,816
- Total agricultural sales: \$388,234,130
- Average age of farmers: 55 years
- All agriculture/agribusiness income: \$763 million or 22.4% percent of the total county value added income (Walden, IMPLAN, 2008)

In 2005, Farm Futures magazine recognized Wayne County as the fifth-best county in the United States in which to farm. Major crops produced in the county are tobacco, wheat, corn, soybeans and cotton.

North Carolina ranks among the top producing states for a variety of crops and livestock. Table 2 contains 2010 statistics reported by the NC Department of Agriculture and Consumer Services. Wayne County agriculture contributes to the ranking of North Carolina nationwide in both crop and livestock production as the county has consistently ranked in the top ten counties in farm cash receipts. The farm cash receipt report for 2010 is denoted in Table 3.

⁴The 2009 *Wayne County Farmland Preservation Plan* (Dixon, Stan W. and MOC Lois G. Britt Agribusiness Center) is the source for much of the discussion in this section on agriculture.

Table 2. North Carolina's Rank in U.S. Agriculture

Rank	Item	Production	N.C. Percentage of U.S.	Top 3 States		
				1	2	3
1	All Tobacco	352.6 (Mil Lbs)	49.1	NC	KY	TN
	Flue-cured Tobacco	348.6 (Mil Lbs)	77.1	NC	VA	SC
	Sweet Potatoes	9,720 (000 Cwt)	40.8	NC	CA	MS
2	All Poultry & Egg Cash Receipts	3,619.8 (Mil \$)	10.2	GA	NC	AR
	Annual Pig Crop Dec 09-Nov 10	19 (Mil Hd)	16.2	IA	NC	MN
	Christmas Tree Cash Receipts	85 (Mil \$)	22.7	OR	NC	WA
	Hogs & Pigs (12-1-10)	9 (Mil Hd)	13.9	IA	NC	MN
	Trout Sold (foodsize)	4 (Mil Lbs)	8.0	ID	NC	CA
	Turkeys	30 (Mil Hd)	12.3	MN	NC	AR
3	Cucumbers - Processing	36.9 (000 Tons)	6.7	MI	FL	NC
	Strawberries – Fresh Market	180 (000Cwt)	0.8	CA	FL	NC

Source: "NC's Rank in US Agriculture." NC Department of Agriculture & Consumer Services.
<http://www.ncagr.gov/stats/crops/Ranking.pdf>. 12 November 2011.

Table 3. TOP TEN COUNTIES IN NC FARM CASH RECEIPTS

Livestock		Crops		Total	
County	Thousands	County	Thousands	County	Thousands
Duplin	\$908,941	Sampson	\$177,045	Duplin	\$1,002,513
Sampson	720,895	Mecklenburg	157,270	Sampson	921,268
Union	339,450	Johnston	120,892	Union	409,874
Bladen	276,335	Wilson	115,637	Wayne	353.118
Wilkes	269,468	Wayne	87,293	Robeson	339.581
Wayne	248,653	Henderson	85,811	Bladen	330.616

Source: "Top Ten Counties in 2010 Farm Cash Receipts." NC Department of Agriculture & Consumer Services.
http://www.ncagr.gov/stats/2011AgStat/Page015_038.pdf. 11 December 2011.

Overall acreage, yield, production and rank of various crops and livestock for Wayne County are reported in Table 4. The diversity of agricultural production in the county is important to the sustainability and profitability of working farms. Developing alternative crop options and value-added ventures offer the agricultural community potential for increased profits while diversifying farm operations. Although agriculture has changed significantly, and many farmers focus on raising one crop or type of livestock, diversifying the operation has proven to be a profitable management plan that helps producers balance losses, preserve income and keep their operation sustainable.

Table 4. WAYNE COUNTY CROP AND LIVESTOCK PRODUCTION SUMMARY

Crops –2010	Acres Harvested	Yield	Production	County Rank
Corn for Grain: Bu	27,300	60	1,631,000	18
Cotton: Lbs: Production in 480 Lb. Bales	9,900	882	18,200	22
Hay, Other: Tons	10,500	2.8	29,500	23
Soybeans: Bu.	59,800	18.1	1,083,000	13
Tobacco, Flue-Cured: Lbs.	8,900	2,055	18,270,000	4
Wheat: Bu.	24,200	30.2	730,000	3
Nursery, Greenhouse, Floricultures & Christmas Trees (Dollars)			7,519,000	26
Vegetables, Fruits, Nuts & Berries (Dollars)			16,230,000	8
Livestock			Number	Rank
Broilers Produced (2010)			14,200,000	19
Cattle, All (Dec. 31, 2010)			8,100	34
Hogs and Pigs (Dec. 1, 2010)			525,000	4
Layers (Dec. 1, 2010)			46,000	35
Turkeys Raised (2010)			3,250,000	3
Cash Receipts – 2010			Dollars	Rank
Livestock, Dairy and Poultry			248,653,000	6
Crops			87,293,000	5
Government Payments			17,172,304	6
Total			353,118,304	4

Source: NC Department of Agriculture and Consumer Services. "County Statistics – 2010."
<http://www.ncagr.gov/stats/codata/wayne.pdf>. 11Dec 2011.

The 2004 tobacco buyout legislation has had a significant impact on the portrait of agriculture in North Carolina and tobacco-dependent counties such as Wayne County. For those actively farming, the buyout provided an opportunity to leave the tobacco business and explore alternative crops. Some farmers opted to pay off debts or purchase more equipment to better compete in the free market while many decided to leave farming entirely. However, the buyout also provided an opportunity to plan for retirement or enhance and diversify current income. The buyout has contributed to the reduction in farm numbers and farmers in eastern North Carolina.

While the number of tobacco farms and farmers may have decreased, tobacco is still the leading agronomic cash crop in Wayne County and other eastern NC counties with harvested acres remaining relatively static. The buyout has resulted in fewer tobacco farmers, but larger farms and greater efficiency. Efficiency is crucial to profitability, as is quality. Tobacco has transitioned into a contractual marketing system much like the swine and poultry industry which has resulted in the tobacco industry relying on those farmers who are efficient and can produce a consistent quality of leaf.

In 2010 North Carolina ranked first in tobacco production in the nation, and Wayne County ranked 4th in the state. Grain crops such as wheat, soybeans and corn are important to farm income and crop rotation in the county. The county ranked 3rd in wheat production in 2010 as well. In 2010 commodity prices were at levels not seen in years increasing the acreage of wheat and other grain crops.

Livestock production is responsible for a large portion of the agricultural economy of Wayne County. Primary livestock operations are contract swine and poultry operations with vertical integrators. In 2010 Wayne County ranked 4th in the state in the production of hogs and 3rd in the state in turkey production.

Horticultural crops are an important source of revenue in Wayne County. Direct markets and other innovative market options make the potential growth in the production of horticultural crops a prospective opportunity for farmers in Wayne County. A focus on market development coupled with the expectation for continued residential growth both in Wayne County and statewide could markedly increase growth potential for commercial fruit and

vegetable production operations as well as ornamental horticulture enterprises.

Wayne County has 141,600 acres of forest with annual timber sales of \$26,000,000. Private ownership accounts for 137,000 acres of forestland. The Forest Service works to educate private landowners on the importance of reforestation and the implementation of best management practices (BMP) to maximize monetary returns from forest assets. Reductions in funding for cost share programs to assist landowners in reforestation and implementation of BMPs have increased the acreage of harvested tracts that are not able to be replanted. In many cases, this leaves forest landowners with no viable program to replant and reinvest in long term forest management strategies. This results in the perception that large tracts of cleared land with no apparent value are available for development which may not be the desire of private forest landowners. Approximately one-half of the privately owned forest acreage in Wayne County is managed under certified management plans. The remaining 4,600 acres of the county's total forested acreage is owned by the state.

According to Wayne County Development Alliance, five of the top manufacturing employers in Wayne County are agribusinesses (*Community Profile*, 2009). They are Mount Olive Pickle, Franklin Baking Company, Case Farms, Georgia Pacific, and Goldsboro Milling.

Farms also provide tax revenue to local government. According to the 2007 Census of Agriculture, the average value of farms and buildings was \$1,008,378 in Wayne County, and the average total farm production expense was \$511,423. In Cost of Community Services studies across various North Carolina counties, evidence supports the fact that agricultural land uses generate more revenue than the cost of community services received by them. This factor alone should serve to encourage local governments to consider incentives for farmland preservation similar to those considered for commercial development especially when employment attributable to agribusiness is considered.

Figure 1 on the next page depicts the decrease in farmland acreage in Wayne County over the last 57 years. Forty percent, over 115,000 acres, was lost during this time period, with 54,000 acres or twenty-four percent lost during the last decade.

Contrarily, the population of Wayne County has increased by 28, 263 people between 1970 and 2008, supporting the premise that development is a component of this loss (*Wayne County Farmland Preservation Plan, 2009*).

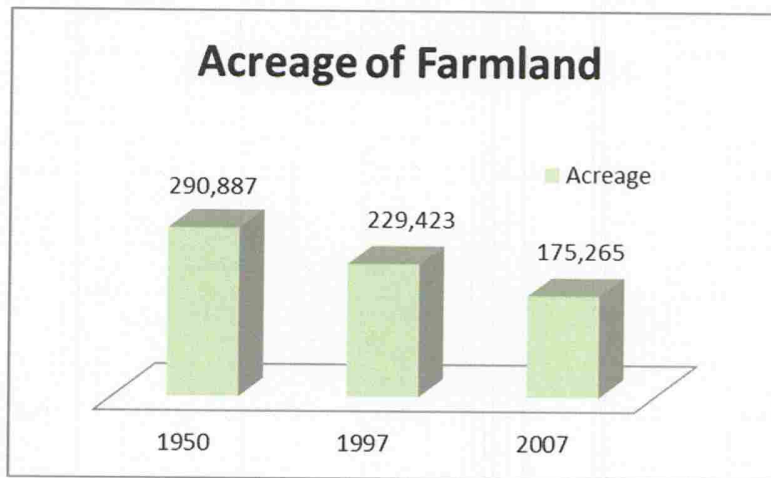


Figure 1. Acreage in Agricultural Production, Wayne County
(2007 U.S. Census of Agriculture)

Figure 2 illustrates a similar trend in farm numbers. Contrarily, the population of Wayne County has increased by 28, 263 people between 1970 and 2008, supporting the premise that development is a component of this loss (*Wayne County Farmland Preservation Plan, 2009*).

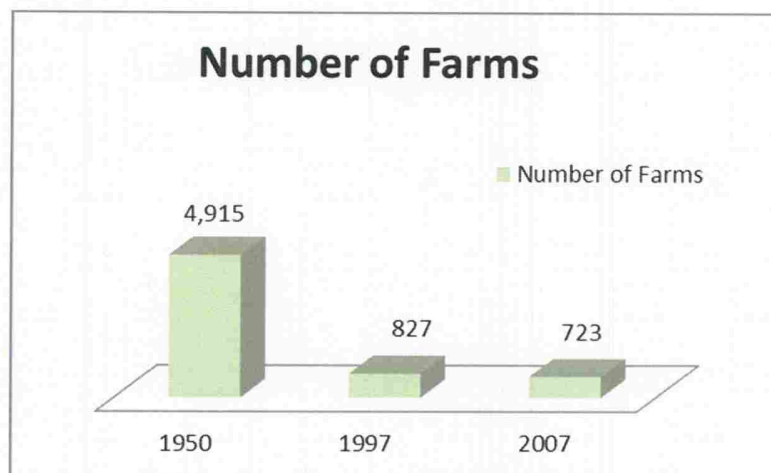


Figure 2. Number of Farms in Wayne County
(2007 U.S. Census of Agriculture)

COST OF COMMUNITY SERVICES STUDIES⁵

A Cost of Community Services (COCS) study is a case study approach used to determine an individual community's public service costs versus revenues based on current land use, specifically residential, commercial/industrial, and farm/forest. Publicly available financial reports (CAFR), departmental records and budgets, and assessor's data are used to allocate revenues and expenditures to determine the financial effects of the various land uses. COCS studies are based on real numbers, making them different from traditional fiscal impact analysis, which is predictive and speculative. They show what services taxpayers receive from their local government and how local government revenues and expenditures relate to land use.

American Farmland Trust (AFT) first became interested in COCS studies and growth-related issues in the 1980s because agricultural lands were converted *more commonly* to development than any other type of land. Farmland is desirable for residential, commercial and industrial land uses because it tends to be flat, well drained and has few physical limitations for development. Developers may view acquired farmland as a short term investment upon return while farmers acquiring additional lands must focus on long-term investment strategies if they are expanding an existing agricultural operation. COCS studies were originally used to investigate three commonly held claims:

1. Open lands—including working agricultural and forest lands—are an interim land use that should be developed to their “highest and best use”;
2. Agricultural land gets an “unfair” tax break when it is assessed at its actual use value for farming or ranching instead of at its potential use value for residential, commercial and industrial;
3. Residential development will lower property taxes by increasing the tax base .

⁵Freedgood, Julia. Cost of Community Services Studies: Making the Case for Conservation. American Farmland Trust. 2002.

In response to these claims, it is of particular relevance to consider the fiscal contributions of privately-owned natural resource lands in areas, such as Wayne County, where farming and forestry are important industries. Although they generate less revenue than residential, commercial or industrial properties, such agribusinesses require little public expenditure due to their modest demands for infrastructure and public services. While it is true that an acre of land with a new house generates more total revenue than an acre of farmland, this information provides little insight into a community's fiscal balance. As a result, COCS studies are used to determine the *net* fiscal impact of land uses in the present by comparing total revenues to total expenditures to ascertain the overall contribution of different land uses (AFT).

COCS studies are conducted for a variety of other reasons, such as supporting existing land protection programs or developing new ones. Some communities are interested in raising awareness about the benefits of protecting natural resources, while others may have broader planning goals. Other primary reasons for COCS are to direct new development toward existing infrastructure or to supplement a comprehensive planning process. *Above all, COCS are most valuable to communities that are concerned about agricultural lands.*

COCS studies are best used in communities similar to Wayne County that rely heavily on property taxes to generate revenues. It is important to recognize that COCS studies are fiscal, not economic analyses and therefore do not examine direct economic benefits or secondary impacts of a given land use to the local or regional economy. COCS studies are not intended to judge the value of one land use over another or compare one type of new development to another. *The particular niche of a COCS study is to identify existing land use relationships and evaluate the contribution of agricultural lands on equal ground with residential, commercial and industrial land uses.* Note, the data provided in COCS studies are "snapshots in time," and as such are neither predictive nor speculative.

Table 5 classifies categories of information that a COCS study can provide and what their ultimate utility can illustrate to local governmental officials.

Table 5. Uses of Cost of Community Services Studies

COCS Studies Do:	COCS Studies Do Not:
<ul style="list-style-type: none"> ○ Provide a baseline of information to help local officials and citizens make informed land use decisions. ○ Offer the benefit of hindsight to see the effect of development patterns to date. ○ Demonstrate the relative fiscal importance of privately owned land in agricultural, forest or other open space uses. ○ Make similar assumptions about apportioning costs to agricultural land as to commercial/industrial land. ○ Have a straightforward methodology and easy-to-understand findings. 	<ul style="list-style-type: none"> ○ Project future costs of services incurred by new development. ○ Determine the direct or indirect value of a particular land use to the local or regional economy. ○ Quantify the non-market costs and benefits that occur when agricultural land is converted to urban uses. ○ Judge the intrinsic value of any particular land use. ○ Compare the costs of different types of residential development. ○ Treat agricultural and other working lands as residential development.

Source: Freedgood, Julia. Cost of Community Services Studies: Making the Case for Conservation. American Farmland Trust. 2002.

Methodology

The following standard land use definitions are adapted to individual COCS studies.

- **Agricultural development** (Farm, Forest and Open Land) – All privately-owned land and buildings associated with agricultural and forestry industries, including temporary housing for seasonal workers who are not permanent residents.
- **Residential development** – All single-and multi-family residences and apartment buildings, including farmhouses, residences attached to other kinds of businesses and rental units; all town-owned property used for active recreation or social functions for local residents.

- **Commercial and Industrial Development⁶** – All privately-owned buildings and land associated with business purposes, the manufacturing of goods or the provision of services, excluding agricultural and forestry industries, and utilities.

There are three basic steps in the process of conducting a COCS study:

1. Collect data: Obtain relevant reports and other financial records, interview officials, boards and departments.
2. Allocate revenues and expenditures by land use.
3. Analyze data and calculate revenue-to-expenditure ratios for each land use category.

The COCS expenditure-revenue ratio compares how many dollars worth of local government services are demanded for each dollar collected. A ratio greater than 1.00 suggests that for every dollar of revenue collected from a given category of land, more than one dollar is spent. Conversely, an expenditure ratio less than 1.00 indicates that for a given category of land, demand for publicly-financed services is less than that sector's contribution to the local budget.

Most studies show that the COCS ratio is substantially above 1 for residential land while ratios for the other two land use categories is usually substantially below 1.

⁶For simplicity, the term “commercial” will denote both industrial and commercial land uses for the remainder of this study. Likewise, “agricultural” will refer to farm and forest land uses.

COCS Method in Wayne County

The basic approach used in the current research was quite simple. Working from Wayne County's 2009-2010 audited financial data, revenues and expenditures were allocated among the three land use categories: agricultural, residential, and commercial/industrial. This process was carried out through interviews and email exchanges with various local officials knowledgeable of and responsible for specific departments (listed in the Acknowledgements). These individuals were obviously best equipped to determine the extent to which the various land categories used the services provided by their departments.

The Wayne County Comprehensive Annual Financial Report (CAFR) for the year ending June 30, 2010 was used to obtain the *actual* revenues and expenditures. Information from county reports for fiscal year 2010 was entered into spreadsheets and allocated by land use. General fund services to county residents and businesses include the following: general government, public safety, transportation, economic and physical development, human services, cultural and recreational and education. The largest county fund was human services with expenditures of \$28.7 million.

Revenues for Wayne County included the following categories: ad valorem taxes, local option sales taxes, other taxes and licenses, unrestricted intergovernmental revenues, restricted intergovernmental revenues, permits and fees, charges for services investment earnings, miscellaneous (including donations, refunds and reimbursements), and other financing sources (including transfers from other funds and sale of capital assets). Real property taxes were collected for the general fund at a rate of 76.40¢ per \$100. For example, a residence appraised at \$100,000 would have an assessed value of \$76,400 for tax purposes. Property tax revenues were allocated to specific land use categories based on the 2009 property tax assessments. Taxes and other revenue sources that are linked directly to residential activities, e.g., Article 40 and 42 sales taxes and jail fees – were allocated exclusively to the residential sector. On the other hand, revenue sources linked directly to commercial activities, e.g., Article 39 sales taxes and cable television franchise taxes – were allocated exclusively to the commercial sector.

In the event that revenues and/or expenditures were not easily amenable to being allocated among various land use categories, one of two allocation schemes was used. For services that exclusively benefit households (as opposed to commercial establishments)⁷—for example, public schools and library services—100% of expenditures were allocated to the residential sector.⁸ For departments whose activities benefited both businesses (including agricultural businesses) and residences, expenditures were allocated based on the proportion of total property value accounted for by each land used category. The “default” breakdown based on *assessed property valuation* for the 2009-2010 fiscal year was 72.8% residential, 18.63% commercial, and 8.57% agricultural. These computations and default percentages are displayed in Table 6.

Table 6. Wayne County COCS Valuations					
Type	Parcels	Assessed Value	Percent	Market Value	Percent
Residential	50,272	3,545,520,520	72.8	3,566,277,570	69.82
Commercial	3,232	907,293,850	18.63	913,907,380	17.89
Agricultural	7,282	417,526,810	8.57	627,582,360	12.29
Total	60,786	4,870,341,180	100.0	5,107,767,310	100.0

⁷ Note that the quality of “residential” services such as public schools may well have a positive influence on business formation, particularly the attractiveness of the county to firms considering relocation. These “spillover” effects are ignored here, however, because the information needs for quantifying them lie well beyond the scope of this research. (Renkow, Franklin County, 2009)

⁸ As is the case with other counties in North Carolina, Wayne County separates the farm business from the farm residence, assessing the property value of farm residences in the same manner as any other residences. For this reasons, farm residences were included in the residential land use category throughout the analysis.

Findings

All findings presented in this section are supported by tables in the Appendix.

Appendix Table 1 summarizes the overall breakdown of county revenues for the 2009-2010 fiscal year. (More detailed information is found in Appendix Table 5.) Total county general fund revenues for 2009-2010 were \$91.3 million. Just over half (54.3%) of this money came from ad valorem property taxes. Sales taxes (17.04%) along with state and federal grants (18.3%) accounted for most of the remainder. This COCS study found that in Wayne County 70 percent of revenue in fiscal year 2010 was generated by residential land uses; 23 percent was generated by commercial land uses; and 7 percent by farmland.

Appendix Table 2 summarizes the overall breakdown of county expenditures for the 2009-2010 fiscal year. (More detailed information is found in Appendix Table 6.) During that year, Wayne County's general fund revenues exceeded expenditures by approximately \$1.7 million. However, there was a \$2 million transfer from a capital reserve fund, an accounting entry required by the Governmental Accounting Standards Board. This COCS study found that in Wayne County 89 percent of county expenditures were used to provide services for residential land use compared with 8 percent for commercial and 3 percent for farmland.

In other words, for each \$1 of revenue received from residential properties in fiscal year 2010, Wayne County spent \$1.24 in providing services to residential land owners. For each \$1 of revenue received from commercial land uses, the county spent 34 cents for the provision of necessary services; and for each \$1 received from farmland, the county spent 47 cents in the delivery of necessary services.

While residential development contributes the largest amount of revenue, \$64 million, its net fiscal impact in Wayne County is negative. Residential land uses created a deficit of \$15.4 million, while the other two land use categories generated surpluses: \$13.8 million from commercial and \$3.3 million from farmland. Commercial and farmland generated significant revenue from property taxes as well as federal and state grants, enough net revenue in fact to offset the shortfall created by residential development.

Both commercial and agricultural lands pay more in local tax revenues than they receive in services.

Break-Even Home Values

The cost of service and revenue numbers that lie behind the ratios reported in this study can also be used to calculate the home value necessary for a county to break-even. If one assumes that service cost is fairly constant across houses relative to the home value, such computations are straightforward. Further, this is not an unreasonable assumption as local government service costs will vary with house location, lot size, and with number of school-age children, but are not particularly correlated with home value. Given this assumption, Appendix Table 4 presents an analysis which computes the residential property value needed to generate a balance between average revenues contributed by current housing units and the average value of public services consumed by those households.

The “breakeven” house price was computed assuming that any new household would consume the average amount of services reflected in the county’s 2009-2010 budget – i.e., that they would possess the average number of school-age children, consume an average amount of public health and social services, etc. The computation further assumes that any new household would contributed the average amount of non-property tax revenues generated by existing residential properties, and takes as a benchmark the current property tax rate of 76.40¢ per \$100. Based on these assumptions, the Wayne County breakeven property value was computed as \$134,032.

Discussion

COCS studies provide a baseline of information to help local officials and citizens make informed land use decisions. They offer the benefit of hindsight to see the effect of development patterns to date. They also demonstrate the fiscal importance of privately owned land in farm and forest uses.

The ratios found in Wayne County are quite comparable to national median values. The residential ratio of \$1 of revenue to \$1.24 expenditure is slightly higher than the national median of \$1.16 but very close to the median for NC studies, \$1.265. The commercial ratio of \$1 of revenue to \$0.345 is almost the same as the national median of 36 cents and the NC median of 36.5 cents. Finally, the farmland ratio of \$1 to \$0.47 is 11 cents higher than the national median of \$0.36 but 11 cents lower than the NC median, primarily due to federal and state grant (\$1,429,166) monies allocated to farmland (Figure 3).

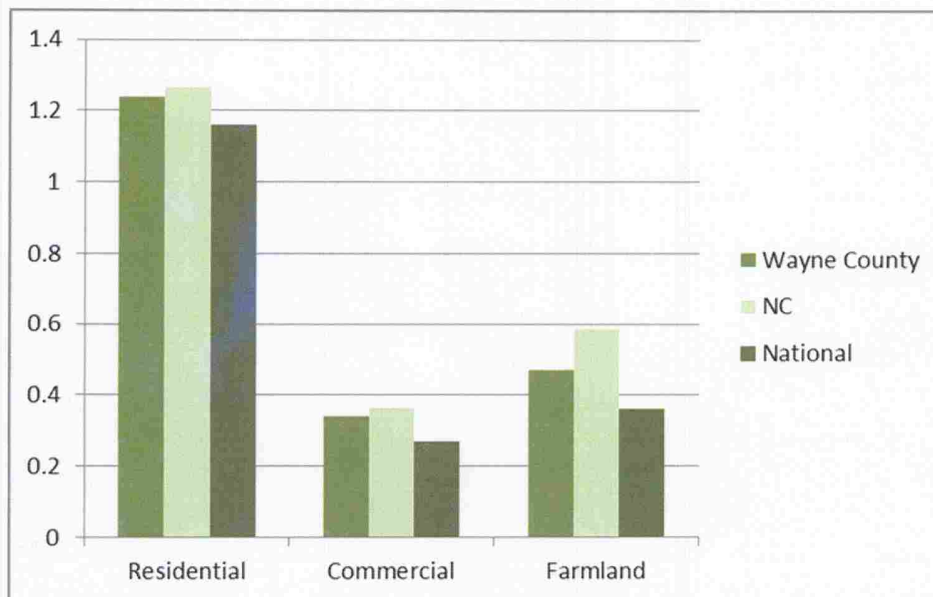


Figure 3. Cost of Community Services Study Ratios
(American Farmland Trust)

The purpose of a COCS study is to determine the net fiscal contribution of farm properties so these lands may be duly considered in the planning process, not to recommend one type of land use over another. Because the studies are descriptive, they should not be used to predict the impact of a single development or to project future costs of services created by new development.

The results of this study, however, provide reliable financial information that demonstrates the importance of agricultural and forest lands to the fiscal stability of Wayne County. As American Farmland Trust has emphasized previously (*COCS Study: Robertson County, Tenn, 2006*), this research also suggests that development of strategies to retain this land base for future agriculture would be a good long-term investment and that:

- Differential property tax programs, such as present-use value, are justified as a way to provide an incentive to keep land open and in active agricultural use. A balance of land uses, including agricultural lands, is needed to provide adequate revenue to pay for these services.
- Taxes and other revenues from residential development do not cover all the public services residents receive from the county.
- Agricultural lands pay more in local tax revenue than these working lands receive in services. Even with a reduced assess value, agricultural properties contribute a surplus of revenue to assist in paying for public services for residents of Wayne County.

The findings of this study show the fiscal benefits that result from agricultural lands and factual information to help residents understand the delicate fiscal balance between taxes, other community revenues and the costs of public services.

The information should be useful for county leaders and residents when faced with land use decisions now and in the future. **In addition to helping maintain fiscal balance, farmlands help sustain Wayne County's economy, contribute to economic diversity and rural character, and help shape the overall quality of life in the region.**

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Appendix: Supporting Tables

Table 1. Wayne County Total Revenue for 2009-2010

Item	Revenue	Percentage
Ad Valorem Taxes	\$ 49,564,479	54.30%
Local Option Sales Tax	15,551,056	17.04%
Other Taxes and Licenses	389,239	0.43%
Unrestricted Intergovernmental Revenues	599,048	0.66%
Restricted Intergovernmental Revenues	16,970,877	18.59%
Permits and Fees	1,439,229	1.58%
Charges for Services	4,258,351	4.67%
Investment Earnings	142,048	0.16%
Miscellaneous	301,953	0.33%
Other Financing Sources ^a	2,063,752	2.26%
Total	\$ 91,280,032	100.00%

^a Includes transfers from other funds and sale of capital assets

Source: **Comprehensive Annual Financial Report**, Wayne County, Fiscal Year Ending, June 30, 2010

Table 2. Wayne County Actual Expenditures for 2009-2010

Item	Expenditure	Percentage
General Government	\$ 9,893,620	11.04%
Public Safety	12,271,289	13.69%
Transportation	429,916	0.48%
Economic and Physical Development	1,585,957	1.77%
Human Services	28,691,084	32.02%
Cultural and Recreational	1,277,252	1.43%
Intergovernmental Education	24,540,731	27.38%
Other Appropriations ^a	10,927,168	12.19%
Total	\$ 89,617,017	100.00%

^a Includes transfers to other funds and debt service

Source: **Comprehensive Annual Financial Report**, Wayne County, Fiscal Year Ending, June 30, 2010

Table 3. Expenditures vs. Revenues in Wayne County

Expenditure/Revenue Ratios from Wayne County			
	Residential	Commercial	Agricultural
Expenditures	\$79,440,270 (88.64%)	\$ 7,257,531 (8.10%)	\$ 2,919,216 (3.26%)
Revenues	\$64,040,726 (70.16%)	\$21,032,183 (23.04%)	\$6,207,123 (6.80%)
Expenditure/Revenue Ratio^a	1.24	0.34	0.47

Expenditure/Revenue Ratios from National Studies^b			
	Residential	Commercial	Agricultural
Minimum	1.02	.05	.04
Median	1.16	.27	.36
Maximum	2.11	1.04	.99

Expenditure/Revenue Ratios from Local NC Studies^c			
	Residential	Commercial	Agricultural
Wake County (2001)	1.54	0.18	0.47
Union County (2004)	1.30	0.41	0.24
Orange County (2006)	1.32	0.24	0.72
Alamance County (2006)	1.47	0.23	0.59
Chatham County (2007)	1.15	0.33	0.58
Henderson County (2007)	1.16	0.40	0.49
Gaston County (2008)	1.23	0.41	0.88
Franklin County (2009)	1.12	0.53	0.76

^a This ratio measures the cost of services used by a given land sector for each dollar of county revenue contributed to that sector.

^b These figures are derived from Cost of Community Services summarized on the American Farmland Trust website (http://www.farmlandinfo.org/documents/27757/FS_COCS_11-02.pdf).

^c Source: Renkow, Mitch. *The Cost of Community Services in Franklin County*. N.C. State University. Raleigh, N.C., 2009.

Table 4. Breakeven Analysis for Residential Property Value

(1)	Property tax rate (cents per \$100 of property value)	76.40
(2)	Residential Non-Property Tax Revenue Contribution in 2009/2010	\$27,957,786
(3)	Total residential expenditures in 2009/2010	\$79,440,270
(4)	Total Expenditures needing to be paid for by property taxes [(3) – (2)]	\$51,482,484
(5)	Number of residential properties in the county	50,272
(6)	Per household expenditures needing to be paid for by property taxes [(4) ÷ (5)]	\$1,024
	Breakeven property value [(6) ÷ (1)]	\$ 134,032

Table 5. Wayne County Actual Revenues by Land Use Category for 2009-2010

Item	Total	Residential	Commercial	Agricultural	Breakdown ^a
Ad valorem taxes	\$ 49,564,479				
Taxes	49,093,171	\$ 35,739,828	\$ 9,146,058	\$ 4,207,285	default
Penalties and interest	471,308	343,112	87,805	40,391	default
Local option sales tax	\$ 15,551,056				
Article 39 one percent	6,739,417	-	6,739,417	-	0-100-0
Article 40 one/half of one percent	4,320,342	4,320,342	-	-	100-0-0
Article 42 one/half of one percent	4,042,808	4,042,808	-	-	100-0-0
Article 44 one/half of one percent	448,489	224,245	224,244	-	50-50-0
Other taxes and licenses	\$ 389,239				
Cable TV franchise tax	354,037	-	354,037	-	0-100-0
Leased vehicle tax	35,202	28,162	6,688	352	80-19-1
Unrestricted intergov revenues	\$ 599,048				
Beer and wine	202,284	-	202,284	-	0-100-0
Incentives	396,764	396,764	-	-	100-0-0
Restricted intergovernmental	\$ 16,970,877				
City of Goldsboro	22,148	22,148	-	-	100-0-0
Federal and State grants	16,676,385	12,140,408	3,106,811	1,429,166	default
Court facility fees	221,559	161,295	41,276	18,988	default
Controlled substance tax	36,985	26,925	6,890	3,170	default
Civil license revenue	13,800	10,046	2,571	1,183	default
Permits and fees	\$ 1,439,229				
Building permits and inspection fees	393,951	256,068	98,488	39,395	65-25-10
Register of Deeds	1,045,278	760,962	194,735	89,580	default
Charges for Services	\$ 4,258,351				
Rents	414,651	301,866	77,249	35,536	default
Jail fees	359,882	359,882	-	-	100-0-0
Service fees	3,184,751	2,318,499	593,319	272,933	default
Tax collection fees	299,067	217,721	55,716	25,630	default

^a Default percentages were based on the 2009 assessed property valuation: 72.8%, 18.63%, and 8.57%.

Source: **Comprehensive Annual Financial Report**, Wayne County, Fiscal Year Ending June 30, 2010

Table 5. Wayne County Actual Revenues by Land Use Category for 2009-2010 (continued)

Item	Total	Residential	Commercial	Agricultural	Breakdown
Investment earnings¹	\$ 142,048	103,411	26,464	12,174	default
Miscellaneous	\$ 301,953				
Donations	103,735	75,519	19,326	8,890	default
Refunds and reimbursements	128,662	93,666	23,970	11,026	default
Other	69,556	50,637	12,958	5,961	default
Other Financing Sources	\$ 2,063,752				
Transfers from other funds ²	2,000,000	2,000,000	-	-	100-0-0
Sale of capital assets ³	63,752	46,411	11,877	5,464	default
Total Revenues	\$ 91,280,032	\$ 64,040,726	\$ 21,032,183	\$ 6,207,123	

¹ Investment earnings are derived from all general fund type revenues. The earnings invested are not from any one source. The pooling method is used; as such, it is impossible to track the original source of the investment dollars. \$100,000 came from the transportation category which is categorized using the default percentage.

² The transfers from other funds is an accounting entry to convert the county financials to the GASB 54 requirements. This fund was originally a capital reserve fund that is presently classified as a general fund type. The original use of the fund was for schools; as a result, the breakdown is 100-0-0.

³ The "sale of assets" is an accumulation of many different categories so the default breakdown is most applicable.

Table 6. Wayne County Actual Expenditures by Land Use Category for 2009-2010

Item	Total	Residential	Commercial	Agricultural	Breakdown ^a
General Government	\$ 9,893,620				
Board of commissioners	213,667	155,550	39,806	18,311	default
County manager	378,433	275,499	70,502	32,432	default
Board of elections	403,902	403,902	-	-	100-0-0
Finance	628,593	457,616	117,107	53,870	default
Information & technology	1,281,002	932,569	238,651	109,782	default
Tax listing	1,327,612	966,502	247,334	113,776	default
GIS	202,836	131,843	50,709	20,284	65-25-10
County attorney	157,126	114,388	29,273	13,466	default
Register of deeds	762,973	305,189	267,041	190,743	40-35-25
Building and grounds	2,759,394	2,008,839	514,075	236,480	default
Central services	672,974	302,838	302,838	67,297	45-45-10
Planning board	401,823	261,185	100,456	40,182	65-25-10
Personnel	277,267	41,590	194,087	41,590	15-70-15
County aid	294,778	280,039	-	14,739	95-0-5
Court facilities	131,240	98,430	32,810	-	75-25-0
Public safety	\$ 12,271,289				
Medical examiner	59,600	59,600	-	-	100-0-0
Office of the sheriff	5,619,571	4,270,874	1,067,718	280,979	76-19-5
County jail	3,308,487	3,308,487	-	-	100-0-0
Day reporting center	138,774	138,774	-	-	100-0-0
Parents of murdered children	83,402	83,402	-	-	100-0-0
NC resource officers	317,381	317,381	-	-	100-0-0
Emergency services	1,702,944	1,226,120	340,589	136,236	72-20-8
Emergency telephone	150,765	108,551	30,153	12,061	72-20-8
Inspectors	387,440	271,208	96,860	19,372	70-25-5
Animal control	502,925	502,925	-	-	100-0-0
Transportation	\$ 429,916	312,979	80,093	36,844	default

Source: Comprehensive Annual Financial Report, Wayne County, Fiscal Year Ending June 30, 2010

Table 6. Wayne County Actual Expenditures by Land Use Category for 2009-2010 (continued)

Item	Total	Residential	Commercial	Agricultural	Breakdown ^a
Economic and physical development	\$ 1,585,957				
Agricultural extension service	534,296	309,892	10,686	213,718	58-2-40
Soil conservation service	219,648	-	-	219,648	0-0-100
SJAFB Support Council	75,424	54,909	14,051	6,464	default
Forest fire control	99,642	-	-	99,642	0-0-100
Economic development	256,666	-	256,666	-	0-100-0
Economic Development Commission	400,281	-	400,281	-	0-100-0
Human Service	\$ 28,691,084				
Veterans service officer	101,283	101,283	-	-	100-0-0
WAGES	421,050	421,050	-	-	100-0-0
4-H Discovery	413,925	413,925	-	-	100-0-0
4-H expansion program	12,813	10,891	-	1,922	85-0-15
4-H fees and donations	19,467	16,547	-	2,920	85-0-15
Drug free schools	43,706	43,706	-	-	100-0-0
Cooperative ext Smart Start	9,240	9,240	-	-	100-0-0
Cooperative ext parents as teachers	147,891	147,891	-	-	100-0-0
County aid	552,564	552,564	-	-	100-0-0
Children and youth council	427,018	427,018	-	-	100-0-0
Senior citizens	737,745	737,745	-	-	100-0-0
Social services	17,964,251	17,964,251	-	-	100-0-0
Public health	7,200,131	6,480,118	720,013	-	90-10-0
Mental health	640,000	640,000	-	-	100-0-0
Cultural and recreational	\$ 1,277,252				
Wayne County Public Library	1,142,455	1,142,455	-	-	100-0-0
County aid	134,797	134,797	-	-	100-0-0
Education	\$ 24,540,731				
Wayne Community College	3,383,085	3,383,085	-	-	100-0-0
Wayne County Public Schools	21,157,646	21,157,646	-	-	100-0-0

Table 6. Wayne County Actual Expenditures by Land Use Category for 2009-2010 (continued)

Item	Total	Residential	Commercial	Agricultural	Breakdown ^a
Other Appropriations	10,927,168				
Debt Service	73,983	53,860	13,783	6,340	default
Transfer to Other Funds	10,853,185	7,901,119	2,021,948	930,118	default
Total Expenditures	\$ 89,617,017	79,440,270	7,257,531	2,919,216	

(Note: This figure for total expenditures includes Transfers Out, pp89-90 CAFR.)